
FCC §15. 319 (i) & §2.1093 - RF EXPOSURE

Applicable Standard

According to §15.319 (i) Unlicensed PCS devices are subject to the radiofrequency radiation exposure requirements specified in § 1.1307(b), 2.1091 and 2.1093 of this chapter, as appropriate. All equipment shall be considered to operate in a “general population/uncontrolled” environment. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

According to KDB 447498 D01 Mobile Portable RF Exposure v041) c): Unless excluded by specific FCC test procedures, portable devices with output power is $\leq 60/f(\text{GHz})$ mW shall include SAR data for equipment approval.

RF Exposure Evaluation

Max peak output power at antenna port:

1921.536 MHz: 20.13dBm = 103.04 mW

The source-based average power at antenna port:

$103.04\text{mW} \times \text{duty cycle} = 103.04 \times 0.0403 = 4.15\text{mW}$ (6.18 dBm)

The source-based average power:

$6.18\text{ dBm} + \text{antenna gain (0 dBi)} = 6.18\text{ dBm} = 4.15\text{ mW}$

Limit: $60/f(\text{GHz}) = 60/1.921536 = 31.22\text{ mW}$

The source-based average power is less than $60/f(\text{GHz})$

So the SAR evaluation can be exempted.